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10/723,633	11/26/2003	James Todhunter	IMC-1000	9719

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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/723,633	TODHUNTER, JAMES	
	Examiner	Art Unit	
	Joseph P. Hirl	2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/4/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to an AMENDMENT entered August 28, 2006 for the patent application 10/723,633 filed on November 26, 2003.

2. All prior office actions are fully incorporated into this Office Action by reference.

Status of Claims

3. Claims 1-28 are pending.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-28 are rejected under 35 U.S.C. § 101 for nonstatutory subject matter. The subject claims fail to provide a tangible result with a practical application by either:

1) transforming (physical thing); or

2) by having the FINAL RESULT (not the steps) achieve or produce

a useful (specific, substantial, and credible),

concrete (substantially repeatable/non-unpredictable), and

tangible (real world/non-abstract)

result.

A claim that is so broad that it reads on both statutory and non-statutory subject matter, must be amended. If the specification discloses a practical application but the claim is broader than the disclosure such that it does not require practical application, then the claim must be amended. A claim that recites a computer that solely calculates a mathematical formula is nonstatutory.

The courts have also held that a claim may not preempt ideas, laws or nature or natural phenomena. The concern over preemption was expressed as early as 1852. See Le Roy v. Tatham, 55 U.S. (14How.) 156, 175 (1852) ("A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right."); Funk Bros. Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 132, 76 USPQ 280, 282 (1948).

Accordingly, one may not patent every "substantial practical application" of an idea, law of nature or natural phenomena because such a patent "in practical effect would be a patent on the [idea, law of nature or natural phenomena] itself." "Here the "process" claim is so abstract and sweeping as to cover both known and unknown uses of the BCD to pure-binary conversion. The end use may (1) vary from the operation of a train to verification of drivers' licenses to researching the law books for precedents and (2) be performed through any existing machinery or future-devised machinery or without any apparatus." Gottschalk v. Benson, 409 U.S. 63, 71-72, 175 USPQ 673, 676 (1972).

The courts have found that subject matter that is not a practical application or use of an idea, a law of nature or a natural phenomenon is not patentable. As the Supreme Court has made clear, "[a]n idea of itself is not patentable," Rubber-Tip Pencil Co. v Howard, 20 U.S. (1 Wall.) 498, 507 (1874); taking several abstract ideas and manipulating them together adds nothing to the basic equation. In re Warmerdam, 31 USPQ2d 1754 (Fed. Cir. 1994).

Preemption exists since the claims can read on any type of problem since any problem can be reformatted into a natural language format.

The claims represent a mathematical algorithm that is abstract in nature. A problem is a mathematical algorithm.

A result that is a practical application has not been established. Submitting a query, providing responses, and submitting solutions are not results that are practical applications.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Putejovsky et al (USPGPubN 2002/0120651, referred to as **Putejovsky**1).

Examiner's Note (EN): ¶ 12. applies. Applicant is invited to review ¶¶ 0002, 0036 and 0038 which incorporate a plurality of subject matter that either applies as incorporated by reference or as inherent to one of ordinary skill in the are at the time of the invention. USPGPubN 2001/0037328, ¶0015 of **Putejovsky1** is **Putejovsky2**. The subject of automation is inherent with the computer implementation. Tech Optimizer, User Guide, by Invention Machine, Version 4.0, © 1995-2002 is an alternative prior art to that of Putejovsky and will be used when and if the prior art of Putejovsky no longer reads on the instant invention.

Claims 1, 2, 3, 16

Putejovsky anticipates (1) problem identification (**Putejovsky1**, ¶ 0018); (2) automatic problem reformulation as a natural language or Boolean query (**Putejovsky2**, Abstract); and (3) automatically submitting the query to one or more knowledge bases for searching (**Putejovsky2**, Abstract; Fig. 1).

Claims 4, 17

Putejovsky anticipates said problem reformulation as a natural language query is done by a portion or portions of the program that translates functional relationships into semantic relationships (**Putejovsky1**, ¶ 0038).

Claim 5

Putejovsky anticipates portion or portions of the program for generating automatic reformulation of the problem generates reformulation of the problem as a natural language query or as a Boolean query (**Putejovsky2**, Abstract; Fig. 1; EN: computer implementation would involve Boolean operations).

Claims 6, 18

Putejovsky anticipates the at least one knowledge base is a semantic analysis knowledge base (**Putejovsky2**, ¶ 0030).

Claims 7, 19

Putejovsky anticipates at least one knowledge base is resident on a storage medium co-located with the computer (**Putejovsky1**, ¶ 0034; EN: if the storage medium is to be effective, it would of consequence be co-located with the computer).

Claims 8, 20

Putejovsky anticipates at least one knowledge base is resident on a corporate server (**Putejovsky1**, ¶ 0034; EN: corporate server is merely descriptive terminology for a computer).

Claims 9, 21

Putejovsky anticipates at least one knowledge base is remotely accessed (**Putejovsky2**, Abstract; Fig. 1).

Claims 10, 22

Putejovsky anticipates a patent collection that is remotely accessed (**Putejovsky2**, Abstract; Fig. 1; EN: patent collection is merely descriptive material that represents data or a knowledge base).

Claims 11, 23

Putejovsky anticipates the program has a portion or portions for accessing a plurality of knowledge bases that are selected from; at least one knowledge base resident on a storage medium co-located with the computer (**Putejovsky2**, Abstract;

Fig. 1), at least one knowledge base on a corporate server (**Putejovsky2**, Abstract; Fig. 1), at least one knowledge base accessed by an internet link (**Putejovsky2**, Abstract; Fig. 1).

Claims 12, 24

Putejovsky anticipates the query is submitted to the at least one knowledge base without intervention by a user (**Putejovsky2**, Abstract; Fig. 1; EN: ¶ 12 applies; once the query has been established, the computer ... system ... processes it without the intervention of the user ... the user is waiting for the answer).

Claims 13, 25

Putejovsky anticipates identification of the problem is done by an analysis to determine functional relationships between components under consideration and the portion or portions for generating from automatic reformulation as a query is done by translating a functional relationship into a natural language query (**Putejovsky2**, Abstract; Fig. 1; ¶¶ 0029, 0030: EN: such is the semantic process for the query matching against a database ... knowledge base).

Claims 14, 26

Putejovsky anticipates identification of the problem is done by root cause analysis that establishes one or more nodes between events under consideration and the automatic reformulation translates a node into a natural language query (**Putejovsky1**, ¶ 0030; Fig. 2; **Putejovsky2**, ¶¶ **0029, 0030**; EN: root cause analysis using stem is synonymous with the function of applicant's node).

Claims 15, 27

Putejovsky anticipates at least one of said knowledge bases is a semantic analysis knowledge base (**Putejovsky1**, ¶ 0034; **Putejovsky2**, ¶ 0029, 0030).

Claim 28

Putejovsky anticipates presenting solution suggestions that result from searching of the one or more knowledge bases (**Putejovsky1**, ¶ 0034; ¶0039; EN: Putejovsky includes both combination and separation of entities such as knowledge bases).

Response to Arguments

8. Applicant's arguments filed on May 9, 2006 and August 28, 2006 related to Claims 1-28 have been fully considered but are not persuasive.

In reference to Applicant's argument:

Pustejovsky does not teach or suggest such an automatic query formulation. In fact Pustejovsky only teaches that the user creates the query. This is a distinctly different invention than that described by Pustejovsky et al. In the cited patent, Pustejovsky describes a system for retrieval of information from an encoded database representation of information extracted from text given a user interaction where in the user has submitted a query. Note the key distinction here is that the action of formulating and submitting the query is left with user. The main function of the Pustejovsky invention is the mechanism whereby such a submitted query is transmitted to and processed against the database to produce results. As applied to claim 1, the Examiner stated that Pustejovsky et al. discloses problem identification (solving issues such as book processing information of an electronic book at 0018, lines 3 and 4, automatic problem reformulation as a natural language or Boolean query (section 0030, lines 4 and 4 (sic)) and automatic submitting the above query to a database (section 0034, last line and section 0038, line 2).

More specifically, in rejecting claim 1, the examiner makes several statements that Pustejovsky discloses problem identification, automatic problem reformulation as a query, and automatic submitting of the query to a database.

Examiner's response:

¶ 12. applies. ¶ 7. applies. Putejovsky teaches computer implemented methodology which is an automated process. Applicant is reminded that: "Limitations

appearing in the specification but not recited in the claim are not read into the claim." Applicant should note that both Putejovsky1 and Putejovsky2 apply ... Applicant is invited to review ¶¶ 0003 – 0017, ¶0036 and ¶ 0038 of Putejovsky1.

In reference to Applicant's argument:

The examiner makes reference to "solving issues such as book processing information of an electronic book" (see. 0018, lines 3 & 4). However, this statement is clearly made in the context of generally describing the problem addressed by the invention and not as an example of the problem that is to be solved by a user through the application of the embodiment of the system.

Examiner's response:

¶ 12. applies. Applicant is reminded that: "Limitations appearing in the specification but not recited in the claim are not read into the claim." Applicant is invited to review ¶¶ 0003 – 0017, ¶0036 and ¶ 0038 of Putejovsky1.

In reference to Applicant's argument:

The examiner cites Pustejovsky as disclosing automatic problem reformulation as a query (sec 0030, lines 4 and 5). The cited section makes no reference to such reformulation and no such reference is described by Pustejovsky. Furthermore, Pustejovsky describes the method of entering the query (sec 0040, lines 5, 6, and 7) as being specifically one in which the user directly supplied the query. While various methods of entry are further describe, they all clearly suggest direct user formulation and submission of the query.

Examiner's response:

¶ 12. applies. ¶ 7. applies. Putejovsky teaches computer implemented methodology which is an automated process. Applicant should note that both Putejovsky1 and Putejovsky2 apply ... Applicant is invited to review ¶¶ 0003 – 0017, ¶0036 and ¶ 0038 of Putejovsky1. If applicant succeeds in appropriately defending a current point against the currently referenced prior art of Putejovsky, other references to

Putejovsky will be cited either under the doctrine of "incorporated by reference" or appropriately as prior art that would be inherently known to one of ordinary skill in the art at the time of the invention.

In reference to Applicant's argument:

In rejecting claim 3, the examiner again states that Pustejovsky is disclosing the identification of a problem, the reformulation as a natural language query, and the automatic submission of the query. However, the component cited (fig 2, device 249) as being the problem identification component is merely an input device which Pustejovsky describes as being used to enter the query. The clear implication is that the problem identification, query formulation, and submittal of the query are all steps performed by the user.

Examiner's response:

¶ 12. applies. ¶ 7. applies. Putejovsky teaches computer implemented methodology which is an automated process ... while the user may formulate the query, the translation of the query by the computer involves the steps of problem identification, formulation and submittal internal to the computer. Applicant is reminded that: "Limitations appearing in the specification but not recited in the claim are not read into the claim." Applicant should note that both Putejovsky1 and Putejovsky2 apply ... Applicant is invited to review ¶¶ 0003 – 0017, ¶0036 and ¶ 0038 of Putejovsky1.

In reference to Applicant's argument:

In rejecting claim 4, the examiner states that Pustejovsky discloses the reformulation of a problem as a natural language query (sec 0038, lines 1 and 2 and sec 0034, last ten lines). The cited text in fact does not describe the reformulation of a problem as a natural language query done by a portion or portions of a program, only that the query is matched against the database.

Examiner's response:

¶ 12. applies. ¶ 7. applies. Putejovsky teaches computer implemented methodology which is an automated process ... when the query is matched against the data base in a computer implemented operation, the problem is being reformulated as representative of a natural language query ... from whence it came ... to be subsequently matched against potential results in the database. Applicant is reminded that: "Limitations appearing in the specification but not recited in the claim are not read into the claim." Applicant should note that both Putejovsky1 and Putejovsky2 apply ... Applicant is invited to review ¶¶ 0003 – 0017, ¶0036 and ¶ 0038 of Putejovsky1.

In reference to Applicant's argument:

In rejecting claim 5, the examiner once again asserts that sec 0030, lines 4 & 5, of Pustejovsky disclose reformulation of a problem as a query. As noted above, there is no such disclosure in the Pustejovsky and in fact Pustejovsky clearly has the user construct and submit the query, see sec 0040, line 7-12.

Examiner's response:

¶ 12. applies. ¶ 7. applies. Putejovsky teaches computer implemented methodology which is an automated process ... when the query is matched against the data base in a computer implemented operation, the problem is being reformulated as representative of a natural language query ... from whence it came ... to be subsequently matched against potential results in the database. Applicant is reminded that: "Limitations appearing in the specification but not recited in the claim are not read into the claim." Applicant should note that both Putejovsky1 and Putejovsky2 apply ... Applicant is invited to review ¶¶ 0003 – 0017, ¶0036 and ¶ 0038 of Putejovsky1. Putejovsky2, Abstract; Fig. 1 identifies the natural language query further discussed at ¶ 0030.

In reference to Applicant's argument:

In rejecting claim 6 the Examiner states that Pustejovsky discloses at least one knowledge bas as a semantic knowledge base (sec 0034, last four lines). Those last four lines make no mention of use of a semantic knowledge base.

Examiner's response:

¶ 12. applies. ¶ 7. applies. See Putejovsky2, ¶ 0030.

In reference to Applicant's argument:

In rejecting claim 7 the Examiner asserts that Pustejovsky discloses the knowledge base is resident on a storage medium with the computer. Although the cited section does not disclose this, it is recognized the knowledge base is stored on a computer.

Examiner's response:

¶ 12. applies. ¶ 7. applies. See Putejovsky1 and Putejovsky2. Such is the operation of a computer implemented system ... nothing novel or non obvious.

In reference to Applicant's argument:

The rejection of claim 12 is on the basis that Pustejovsky teaches that the query is submitted to the knowledge base without intervention by the user, citing figure 2, device 243, 232 and 240. However as noted, in Pustejovsky, the user creates and submits the query.

Examiner's response:

¶ 12. applies. ¶ 7. applies. Once the user has formulated the query, it is then submitted to the data base by a computer implemented process ... automation.

In reference to Applicant's argument:

In rejecting claim 13, the Examiner states that Pustejovsky discloses identification of the problem is done by an analysis of functional relationships between components and the consideration (see 0023 lines 1-3). Those lines state "in a specific embodiment the present invention provides a method for querying information based upon a publication on a portable electronic display." This is completely distinct from any disclosure's suggestion of an analysis of functional relationships between components under consideration. Similarly, the Examiner asserts that the automatic reformulation as a query is done by

translating a functional relationship into a natural language query shown at see 0030, line 4 and 5. However as noted above, there is no disclosure or suggestion of such automatic reformulation.

Examiner's response:

¶ 12. applies. ¶ 7. applies. (**Putejovsky2**, Abstract; Fig. 1; ¶¶ 0029, 0030; EN: such is the semantic process for the query matching against a database ... knowledge base).

In reference to Applicant's argument:

In rejecting claim 14, the Examiner asserts that Pustejovsky discloses identification of the problem is done by root cause analysis that establishes one or more nodes between events under consideration citing Fig. 1 devices 231,233,235, 237, and 239. However, description of those devices makes no mention of root cause analysis nor does any analysis of the text allow suggestion that a functional analysis tool is being employed or that such a tool is root cause analysis.

Examiner's response:

¶ 12. applies. ¶ 7. applies. See Putejovsky1, ¶ 0030; Fig. 2; Putejovsky2, ¶¶ 0029, 0030; EN: root cause analysis using translation involving stem is synonymous with the function of applicant's node.

In reference to Applicant's argument:

In rejecting claim 15, the Examiner cites Pustejovsky as disclosing that a knowledge base is a semantic analysis knowledge base citing section 0034, last 10 lines. Although those last ten lines make reference to "syntactic information" and "semantic information," they do not state nor suggest that an automatically formed query is submitted to a semantic analysis knowledge base.

Examiner's response:

¶ 12. applies. ¶ 7. applies. See also Putejovsky2, ¶¶ 0029, 0030.

Examination Considerations

9. The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris,* 127 F.3d 1048, 1054-55, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, l 45-48; p 2100-9, c 1, l 1-4). The Examiner has full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

10. Examiner's Notes are provided with the cited references to prior art to assist the applicant to better understand the nature of the prior art, application of such prior art and, as appropriate, to further indicate other prior art that maybe applied in other office actions. Such comments are entirely consistent with the intent and spirit of compact prosecution. However, and unless otherwise stated, the Examiner's Notes are not prior art but a link to prior art that one of ordinary skill in the art would find inherently appropriate.

11. Unless otherwise annotated, Examiner's statements are to be interpreted in reference to that of one of ordinary skill in the art. Statements made in reference to the condition of the disclosure constitute, on the face of it, the basis and such would be

obvious to one of ordinary skill in the art, establishing thereby an inherent prima facie statement.

12. Examiner's Opinion: ¶¶ 9.-11. apply. The Examiner has full latitude to interpret each claim in the broadest reasonable sense.

Conclusion

13. The prior art of record and not relied upon is considered pertinent to applicant's disclosure.

- Arel et al., TechOptimizer User Guide

14. Claims 1-28 are rejected.

Correspondence Information

15. Any inquiry concerning this information or related to the subject disclosure should be directed to the Primary Examiner, Joseph P. Hirl, whose telephone number is (571) 272-3685. The Examiner can be reached on Monday – Thursday from 5:30 a.m. to 4:00 p.m.

As detailed in MPEP 502.03, communications via Internet e-mail are at the discretion of the applicant. Without a written authorization by applicant recorded in the applicant's file, the USPTO will not respond via e-mail to any Internet correspondence which contains information subject to the confidentiality requirement as set forth in 35

U.S.C. 122. A paper copy of such correspondence will be placed in the appropriate patent application. The following is an example authorization which may be used by the applicant:

> Notwithstanding the lack of security with Internet Communications, I hereby authorize the USPTO to communicate with me concerning any subject matter related to the instant application by e-mail. I understand that a copy of such communications related to formal submissions will be made of record in the applications file.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, David R. Vincent can be reached at (571) 272-3080.

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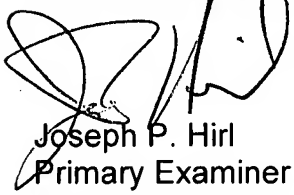

Joseph P. Hirl
Primary Examiner
October 30, 2007